

# SEQUENCE LISTING

<110> Nunomura, Kiyotada  
 <120> POLYNUCLEOTIDE AMPLIFICATION METHOD  
 <130> GP104-02.UT  
 <160> 9  
 <170> FastSEQ for Windows Version 3.0  
 <210> 1  
 <211> 55  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Primer T7A(-)4190

#5

<400> 1  
 aattttaatac gactcactat agggagagtt tgtatgtctg ttgctattat gtcta 55

<210> 2  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Primer (+)4108

<400> 2  
 acagcagtag aaatggcag 19

<210> 3  
 <211> 8933  
 <212> RNA  
 <213> Human Immunodeficiency Virus  
 <220>  
 <221> source  
 <222> (1)...(8933)  
 <223> Sequence of transcripts produced from the BH10 plasmid.

<400> 3  
 gagcucucuc gacgcaggac ucggcuugcu gaagcgcgca cggcaagagg cgaggggagg 60  
 cgacugguga guacgccaaa aauuuugacu agcggaggcu agaaggagag agaugggugc 120  
 gagagcgua guauuaagcg ggggagaaau agaucgaugg gaaaaaaauuc gguaaaggcc 180  
 aggggggaaag aaaaaauaua aauuaaaaca uauaguaugg gcaagcaggg agcuagaacg 240  
 auucgcaguu aaucugggcc uguuagaaac aucagaaggc uguagacaaa uacugggaca 300  
 gcuacaacca ucccuucaga caggaucaaga agaacuuaaga ucauuauaua auacaguagc 360  
 aaccucucua ugugugcauc aaaggauaga gaaaaaagac accaaggagc cuuagacaa 420  
 gauagaggaa gagcaaaaaca aaaguaagaa aaaagcacag caagcagcag cugacacagg 480  
 acacagcagu caggucagcc aaaaauaccc uauagugcag aacauccagg ggcaaauggu 540  
 acaucaggcc auaucaccua gaacuuuaaa ugcaugggga aaaguaaguag aagagaaggc 600  
 uuucagccca gaaguaauac ccauguuuuc agcauuauca gaaggagcca ccccaacaaga 660  
 uuuuaaacacc augcuaaaca caguggggggg acaucaagca gccaugcaaa uguuaaaaaga 720  
 gaccaucaau gaggaagcug cagaauaggga uagaguacau ccagugcagc cagggccuau 780  
 ugcaccaggc cagaugagag aaccaagggg aagugacaua gcaggacua cuaguacccu 840  
 ucaggaacaa auaggaugga ugacaaaaua uccaccuau ccaguaggag aaauuuauaa 900  
 aagauggaua auccugggga uaaaauaaaa aguaagaau uauagcccua ccagcauucu 960  
 ggacauaaga caaggacca aagaaccuuu uagagacuau guagaccggu ucuauaaaac 1020  
 ucuaagagcc gagcaagcuu cacaggaggu aaaaaauugg augacagaaa ccuuguuggu 1080  
 ccaaaugcg aaccagauu guaagacuau uuuuaaagca uugggaccag cggcuacacu 1140



agaagaaaug	augacagcau	gucagggagu	aggaggaccc	ggccauaagg	caagaguuuu	1200
ggcugaagca	augagccaag	uaacaaaauac	agcuaccaua	augaugcaga	gaggcauuu	1260
uaggaaccaa	agaaagaugg	uuaaguguuu	caauuguggc	aaagaagggc	acacagccag	1320
aaaugcagg	gccccuagga	aaaagggcug	uuggaaaugu	ggaaaggaag	gacaccaaau	1380
gaaagauugu	acugagagac	aggcuauuuu	uuuaggggaag	aucuggccuu	ccuacaaggg	1440
aaggccagg	aauuuucuu	agagcagacc	agagccaaca	gccccaccau	uucucagag	1500
cagaccagag	ccaacagccc	caccagaaga	gagcuucagg	ucuggggguag	agacaacaac	1560
uccccucag	aagcaggagc	cgauagacaa	ggaacugua	ccuuuaacuu	cccucagauc	1620
acucuuuggc	aacgaccccu	cgucacaaua	aagauagggg	ggcaacuaaa	ggaagcucua	1680
uuagauacag	gagcagauga	uacaguauua	gaagaaauga	guuugccagg	aagauggaaa	1740
ccaaaaauga	uaggggggaa	uggagguuuu	aucaaaagua	gacaguauga	ucagauacuc	1800
auagaaaucu	guggacauaa	agcuauaggu	acaguauuag	uaggaccuac	accugucaac	1860
auaaauugga	gaaaucuguu	gacucagauu	ggugcacu	uaauuuuucc	cauuagcccu	1920
auugagacug	uaccaguaaa	auuaaagcca	ggaauggaug	gccccaaaagu	uaaacaauug	1980
ccauugacag	aagaaaaaa	aaaagcauuu	guagaaaauu	guacagaaa	ggaaaaggaa	2040
gggaaaauuu	caaaaaauug	gccugagaa	ccauacaaua	cuccaguauu	ugccauaaag	2100
aaaaaagaca	guacuaauug	gagaaaaaua	guaguauuca	gagaacuuua	uaagagaacu	2160
caagacuucu	gggaaguuca	auuaggaaua	ccacaucccg	caggguuaaa	aaagaaaaaa	2220
ucaguaacag	uacuggaugu	gggugaugca	uaauuuucag	uucccuuaga	ugaagacuuc	2280
aggaaguaua	cugcauuuac	cauaccuagu	auaaacaau	agacaccagg	gauuagauau	2340
caguacaau	ugcuuccaca	gggauggaaa	ggauccagg	cauaauucca	aaguagcaug	2400
acaaaaucuu	uagagccuuu	uaaaaaacaa	auaccagaca	uaguuauca	ucauacau	2460
gaugauuuugu	auguaggauc	ugacuuaaga	auagggcagc	auagaacaaa	aaugaggag	2520
cugagacaac	aucuguugag	gugggggacu	accacaccag	acaaaaacaa	ucagaaagaa	2580
ccuccauucc	uuuggauggg	uuugaacuc	cauccugaua	aauggacagu	acagccuaua	2640
gugcugccag	aaaaagacag	cuggacuguc	aaugacauac	agaaguua	ggggaauug	2700
aauggggcaa	gucagauuuu	cccagggaau	aaaguaaggc	aaauauguaa	acuccuaga	2760
ggaaaccaa	cacuaacaga	aguaauacca	cuaacagaag	aagcagagcu	agaacuggca	2820
gaaaacagag	agauucuaaa	agaaccagua	cauggagugu	auuaugaccc	aucaaaagac	2880
uuauuagcag	aaauacagaa	gcaggggcaa	ggccaaugga	cauaucuuuu	uuaucaagag	2940
ccauuuuaaa	aucugaaaa	aggaaaaaua	gcaagauga	ggggugccca	cacuaugau	3000
guaaaacaa	uaacagaggc	agugcaaaaa	auaaccacag	aaagcauagu	aaauugggga	3060
aagacuccua	aauuuaaacu	acccauacaa	aaggaaacau	gggaaacau	guggacagag	3120
uaugggcaag	ccaccuggau	uccugagugg	gaguugguua	auacccucc	uuuagugaaa	3180
uuauuguaac	aguuaagaa	agaaccuaua	guaggagcag	aaaccuucua	uguagauggg	3240
gcagcuuaac	gggagacuaa	auuaggaaaa	gcaggauaug	uuacuaacaa	aggaagacaa	3300
aagguugucc	cccuaacuaa	cacaacaaau	cagaaaacug	aguuaacaagc	aauuuauca	3360
gcuuugcagg	auucaggauu	agaaguuaac	auaguaacag	acucacaaau	ugcauuagga	3420
aucauucag	cacaaccaga	uaaaagugaa	ucagaguuag	ucaaucaaa	aaauagagcag	3480
uuauuaaaaa	aggaaaaggu	cuauucuggca	uggguuaccag	cacacaaagg	aauggaggga	3540
aaugaacaa	uagauaaaau	agucagugcu	ggaaucagga	aaauacuaau	uuuagauugga	3600
auagauaagg	ccaagauga	acaugagaaa	uauacagua	auuggagagc	aauggcuagu	3660
gauuuuaacc	ugccaccugu	aguagcaaaa	gaaauaguag	ccagcuguga	uaaaugucag	3720
cuaaaaggag	aagccaugca	uggacaagua	gacuguaugc	caggaauaug	gcaacuagau	3780
uguacacauu	uagaaggaaa	aguuaucug	guagcaguuc	auguagccag	uggauauaua	3840
gaagcagaag	uuauuucagc	agaaacagg	caggaaacag	cauauuuucu	uuuaaaaua	3900
gcaggaagau	ggccaguaaa	aacaauacau	acagacaau	gcagcauuu	caccagugcu	3960
acgguuuagg	ccgcuuguu	gugggcggga	aucaagcagg	aaauuggaa	uccuacaa	4020
ccccaaaguc	aaggaguagu	agaaucuau	aauaaagaa	uaaagaaaa	uauaggacag	4080
guagagauuc	aggcugaaca	ucuuagaca	gcaguacaaa	uggcaguauu	cauccacaa	4140
uuuaaaagaa	aaaggggggu	uggggggguac	agugcagggg	aaagaauagu	agacauaaua	4200
gcaacagaca	uacaaacuaa	agaauuacaa	aaacaaaua	caaaaaauca	aaauuuucgg	4260
guuuauuaca	gggacagcag	aaauccacu	uggaaaggac	cagcaaagcu	ccucuggaaa	4320
ggugaagggg	caguaguaau	acaagauaua	agugacauaa	aaguagugcc	aagaagaaaa	4380
gcaaagauca	uuagggaaua	uggaaaacag	auggcaggug	augauugugu	ggcaaguaga	4440
caggauagag	auuaagacau	ggaaaaguuu	aguaaaacac	cauauguau	uuucagggaa	4500
agcuagggga	ugguuuuaua	gacauacua	ugaaagcccu	cauccaagaa	uaaguucaga	4560
aguacacau	ccacuagggg	augcuagauu	gguaauaaca	acauauuggg	gucugcauac	4620
aggagaaaga	gacuggcauu	ugggucaggg	agucuccaua	gaauggagga	aaaagagaua	4680
uagcacacaa	guagaccucg	aacuagcaga	ccaacuauuu	caucuguaau	acuuugacug	4740
uuuuucagac	ucugcuauaa	gaaaggccuu	auuaggacac	auaguuaagcc	cuagguguga	4800
auaucaagca	ggacauaaca	agguaggau	ucuacaauac	uuggcacuag	cagcauuauu	4860
aacacaaaaa	aagauaaagc	caccuuugcc	uaguguuacg	aaacugacag	aggauagau	4920
gaacaagccc	cagaagacca	agggccacag	aggggaccc	acaauagaa	gacacuagag	4980
cuuuuagagg	agcuuaagaa	ugaagcuguu	agacauuuuc	cuaggauuug	gcuccauggc	5040
uuagggcaac	auaucuauga	aacuuauugg	gauacuuggg	caggagugga	agccauaaua	5100

agaauucugc	aacaacugcu	guuuauccau	uuucagaaau	gggugucgac	auagcagaau	5160
aggcguauc	cgacagagga	gagcaagaaa	uggagccagu	agaucuuaga	cuagagcccu	5220
ggaagcaucc	aggaagucag	ccuaaaacug	cuuguaccaa	uugcuauugu	aaaaaguguu	5280
gcuuucuuug	ccaaguuuugu	uucuaaacia	aagccuuagg	caucuccuau	ggcaggaaga	5340
agcggagaca	gcgacgaaga	ccuccucaag	gcagucagac	ucaucaaguu	ucucuaucaa	5400
agcaguaagu	aguacaugua	augcaaccua	uacaaauagc	aauguagca	uuaguaguag	5460
caauaauaau	agcaauagu	guguggucca	uaguaaucau	agaauauagg	aaaaauuaa	5520
gacaaagaaa	aaauagacagg	uuaauugaua	gacuaauaga	aagagcagaa	gacaguggca	5580
augagaguga	aggagaaaau	ucagcacuug	uggagauggg	gguggagaug	gggcaccaug	5640
cuccuuggga	uguugaugau	cuguagugcu	acagaaaaau	ugugggucac	agucuauuau	5700
gggguaccug	uguggaagga	agcaaccacc	acucuaauuu	gugcaucaga	ugcuaaagca	5760
uagauacag	agguacauaa	uguuuggggc	acacagccu	guguacccac	agaccccaac	5820
ccacaagaag	uaguauuggu	aaaugugaca	gaaaauuua	acauguggaa	aaaugacaug	5880
guagaacaga	ugcaugagga	uauaaucau	uuauuggauc	aaagccuaaa	gccaugugua	5940
aaaauaacc	cacucugugu	uaguuuaaag	ugcacugauu	ugaagaaua	uacuaauacc	6000
aauguagu	gcgggagaa	gauaauggag	aaaggagaga	uaaaaaacug	cucuuaaua	6060
aucagcaca	gcuaaagagg	uaaggugcag	aaagaauaug	cauuuuuuua	uaaacuugau	6120
auaaauacca	uagauaauga	uacuaccagc	uauacguuga	caaguuguaa	caccucaguc	6180
auuacacagg	ccuguccaaa	gguaucuuu	gagccaauc	ccauacauua	uugugccccg	6240
gcugguuuug	cgauucuaaa	auguaauaau	aagacguuca	auggaacagg	accauguaca	6300
aaugucagca	caguacaau	uacacaugga	auuaggccag	uaguaucaac	ucaacugcug	6360
uuaauggcag	gucuggcaga	agaagaggua	guaauuagau	cugccaaauu	cacagacaau	6420
gcuaaaacca	uaauaguaca	gcugaacca	ucuguagaaa	uuauuugua	aagacccaac	6480
aacaauacaa	gaaaaaguu	ccguauccag	agaggaccag	ggagagcauu	uguuacaaua	6540
ggaaaaauag	gaaaauugag	acaagcacau	uguaacauua	guagagcaaa	auggaauaac	6600
acuuuaaaac	agauagauag	caaaauaaga	gaacaauuug	gaaauaaua	aacaauaac	6660
uuuagcagu	ccucaggagg	ggaccagaa	auuguaacgc	acaguuuuaa	uuguggagg	6720
gaauuuuucu	acuguaauuc	aacacaacug	uuuauagua	cuugguuuaa	uaguacuugg	6780
aguacuaaag	ggucaaaaua	cacugaagga	agugacacaa	ucacccucucc	augcagaaua	6840
aaacaaaaua	uaaacaugug	gcaggaagua	ggaaaagcaa	uguaugcccc	ucccaucagu	6900
ggacaaaaua	gauguucauc	aaauauuaca	gggcugcuau	uaacaagaga	uggugguaua	6960
agcaacaau	aguccgagau	cuucagaccu	ggaggaggag	auaugaggga	caauuggaga	7020
agugaauuau	auaaauaua	aguaguaaaa	auugaaccu	uaggaguagc	acccaccaag	7080
gcaaagagaa	gaguggugca	gagagaaaaa	agagcagugg	gaauaggagc	uuuguuccuu	7140
ggguucuuug	gagcagcagg	aagcacuag	ggcgacagcu	caaugacgcu	gacgguacag	7200
ggcagacaa	uauugucugg	uauagucag	cagcagaaca	auuugcugag	ggcuauugag	7260
gcgcaacag	aucguugca	acucacaguc	uggggcauca	agcagcucca	ggcaagaau	7320
cuggcugugg	aaagauaccu	aaaggaucaa	cagcuccugg	ggauuugggg	uugcucugga	7380
aaacucauuu	gcaccacugc	ugugccuugg	aaugcuagu	ggaguauuaa	aucucuggaa	7440
cagauuugga	auaacaugac	cuggaugggag	ugggacagag	aaauuaacia	uaacacaagc	7500
uuauuacacu	ccuuauuuga	agaauccgaa	aaccagcaag	aaaagaaua	acaagaaua	7560
uuggaaauag	auaaauuggg	aaguuugugg	aaauugguuu	acauaaciaa	uuggcugugg	7620
uauauaaaa	uauucauaau	gauaguagga	ggcuugguag	guuuuagaa	aguuuuugcu	7680
guacuucug	uagugaauag	aguagggcag	ggauauucac	cauuaucguu	ucagacccac	7740
cucccaaucc	cgaggggacc	cgacaggccc	gaaggaaug	aagaagaagg	uggagagaga	7800
gacagagaca	gauccauucg	auuagugaac	ggauccuuag	cacuuauucg	ggcgaucug	7860
cgagagccug	gccucuucag	cuaccaccgc	uugagagacu	uacucuugau	uguaacgagg	7920
auuguggaac	uucugggacg	cagggggugg	gaagcccua	aaauuuggug	gaauccucca	7980
caguauugga	gucaggagcu	aaagaauagu	gcuguuagcu	ugcucaaugc	cacagcuaua	8040
cgccacauac	aggggacaga	uagggguaua	gaaguaguac	aaggagcuua	uagagcuauu	8100
gcagagagcu	cuagaagaau	aagacagggc	uuggaaagga	uuuugcuaua	agaugggugg	8160
caagugguca	aaaaguagug	ugguuggaug	gccugcugua	agggaaagaa	ugagacgagc	8220
ugagccagca	gcagaugggg	ugggagcagc	aucucgagac	cuagaaaaac	auggagcaau	8280
cacaaguagc	aacacagcag	cuaacaaugc	ugauugugcc	uggcuagaag	cacaagagga	8340
ggaggaggug	gguuuuccag	ucacaccuca	gguaaccuuu	agaccaauga	cuuacaaggc	8400
agcuguagau	cuuagccacu	uuuuuuuaga	aaagggggga	cuggaagggg	uaauucacuc	8460
ccaacgaaga	caagauaucc	uugaucugug	gaucuaaccac	acacaaggcu	acuucccuga	8520
uuagcagaac	uacacaccag	ggccagggau	cagauaucca	cugaccuuug	gauggugcu	8580
caagcuagua	ccagugagc	cagagaaguu	agaagaagcc	aacaaaggag	agaacaccag	8640
cuuguuacac	cugugagcc	ugcauggaau	ggauagaccg	gagagagaag	uguuagagug	8700
gagguuugac	agccgcuag	cauuucauca	cauggcccga	gagcugcauc	cggaguacuu	8760
caagaacugc	ugacauccag	cuugcuacaa	gggacuuucc	gcuggggacu	uuccagggag	8820
gcguggccug	ggcgggacug	gggaguggcg	agcccucaga	uccugcauau	aagcagcugc	8880
uuuuugccug	uacugggucu	cucugguuag	accagaucug	agccuggggag	cuc	8933

<210> 4  
 <211> 8933  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Sequence of the IAC-Asrc pseudo target  
  
 <221> mutation  
 <222> (4135)...(4155)  
 <223> Mutated positions: 4135, 4140-1, 4145, 4150,  
 4152-3, 4155

<400> 4					
gagcucucuc	gacgcaggac	ucggcuugcu	gaagcgcgca	cggcaagagg	cgagggggcgg 60
cgacugguga	guacgccaaa	aauuuugacu	agcggaggcu	agaaggagag	agauggggcgc 120
gagagcguca	guauuaagcg	ggggagaaau	agaucgaugg	gaaaaaaauuc	gguuuagggcc 180
agggggaaag	aaaaaaauua	aauuuaaaca	uauaguaugg	gcaagcaggg	agcuagaacg 240
auucgcaguu	aauccuggcc	uguuagaaac	aucagaaggc	uguagacaaa	uacuggggaca 300
gcuacaacca	ucccuucaga	caggauucaga	agaacuuaga	ucauuauuaa	auacaguagc 360
aaccucucua	ugugugcauc	aaaggauaga	gauaaaaagac	accaagggaag	cuuuagacaa 420
gauagaggaa	gagcaaaaaca	aaaguaagaa	aaaagcacag	caagcagcag	cugacacagg 480
acacagcagu	caggucagcc	aaaauuaccc	uauagugcag	aacauccagg	ggcaaauggu 540
acaucaggcc	auaucaccua	gaacuuuaaa	ugcaugggua	aaaguaguag	aagagaaggc 600
uuucagccca	gaaguaauac	ccauguuuuc	agcauuauca	gaaggagcca	ccccacaaga 660
uuuaaacacc	augcuaaaca	caguggggggg	acaucagca	gccaugcaaa	uguuaaaaga 720
gaccaucaau	gaggaagcug	cagaauggga	uagaguacau	ccagugcaug	caggggccuau 780
ugcaccaggc	cagaugagag	aaccaagggg	aagugacaua	gcagggaacua	cuaguacccu 840
ucaggaacaa	auaggauugga	ugacaaaaua	uccaccuauc	ccaguaggag	aaauuuauaa 900
aagauggaua	auccugggau	uaaaauaaaa	aguaagaaug	uauagcccua	ccagcauucu 960
ggacauaaga	caaggaccaa	aagaaccuuu	uagagacuau	guagaccggu	ucuauaaaaac 1020
ucuaagagcc	gagcaagcua	cacaggaggu	aaaaaaauug	augacagaaa	ccuuguuggu 1080
ccaaaaugcg	aaccagauu	guaagacuau	uuuaaaagca	uuggggaccag	cggcuacacu 1140
agaagaaaug	augacagcau	gucagggagu	aggaggaccc	ggccauaagg	caagaguuuu 1200
ggcugaagca	augagccaag	uaacaaaaua	agcuaccuaa	augaugcaga	gaggcauuuu 1260
uaggaaccac	agaaaagugg	uuuaguguuu	caaauugggc	aaagaagggg	acacagccag 1320
aaauugcagg	gccccuagga	aaaagggcug	uuggaaaugu	ggaaaaggaag	gacaccaaau 1380
gaaagauugu	acugagagac	aggcuauuuu	uuuaggggaag	aucuggccuu	ccuacaaggg 1440
aaggccaggg	aauuuucuuu	agagcagacc	agagccaaca	gccccaccuu	uucucagag 1500
cagaccagag	ccaacagccc	caccagaaga	gagcuucagg	ucuggggguag	agacaacaac 1560
ucccccucag	aagcaggagc	cgauagacaa	ggaacuguaa	ccuuuaacuu	cccucagauc 1620
acucuuuggc	aacgaccccu	cgucacaaua	aagauagggg	ggcaacuaaa	ggaagcucua 1680
uuagauacag	gagcagauga	uacaguauua	gaagaaauga	guuugccagg	aagauggaaa 1740
ccaaaaauga	uaggggggaau	uggagguuuu	aucaaaagua	gacaguaua	ucagauacuc 1800
auagaaaucu	guggacauaa	agcuauaggu	acaguauuag	uaggaccuac	accuguaaac 1860
auaaugggaa	gaaauuguuu	gacucagauu	gguggcacuu	uaaaauuucc	cauuagcccu 1920
auugagacug	uaccaguaaa	auuaaagcca	ggaauggaug	gccccaaaagu	uaaacaauug 1980
ccauugacag	aagaaaaaaau	aaaagcauuu	guagaaaauu	guacagaaaau	ggaaaaggaa 2040
gggaaaaauu	caaaaaauug	gccugagaau	ccauacaaua	cuccaguauu	ugccauaaag 2100
aaaaaagaca	guacuaaaug	gagaaaaaua	guagauuuca	gagaacuuua	uaagagaacu 2160
caagacuucu	gggaaguuca	auuaggaaua	ccacaucccg	caggguuaaa	aaagaaaaaa 2220
ucaguaacag	uacuggaugu	gggugaugca	uaauuuucag	uucccuuaga	ugaagacuuc 2280
aggaaguaua	cugcauuuac	cauaccuagu	auaaacaaug	agacaccagg	gauuagauau 2340
caguacaauu	ugcuuccaca	gggaugggaa	ggauaccag	caauauucca	aaguagcaug 2400
acaaaaaucu	uagagccuuu	uaaaaaacaa	aauccagaca	uaguuauca	ucauuacau 2460
gaugauuuu	auguaggauc	ugacuuagaa	auagggcagc	auagaacaaa	aaauagaggag 2520
cugagacaac	aucuguugag	gugggggacuu	accacaccag	acaaaaaaca	ucagaaagaa 2580
ccuccauucc	uuuggauggg	uuuugaacuc	cauccugaua	aauggacagu	acagccuaua 2640
gugcugccag	aaaaagacag	cuggacuguc	aaugacauac	agaaguuaug	ggggaaaauug 2700
aaauugggcaa	cucagauuuu	cccagggauu	aaaguaaggc	aauuuuguaa	acuccuaga 2760
ggaaccaaaag	cacuaacaga	aguaauacca	cuaacagaag	aagcagagcu	agaacuggca 2820
gaaaacagag	agaauucuaaa	agaaccagua	cauggagugu	auuaugaccc	aucaaaaagac 2880
uuauuagcag	aaauacagaa	gcagggggcaa	ggccaaugga	cauaucaauu	uuaucaagag 2940
ccauuuuaaaa	aucugaaaac	aggaaaaaua	gcaagaaua	ggggugccca	cacuaaagau 3000
guaaaaacau	uaacagaggc	augcagaaua	auaaccacag	aaagcauagu	aaauagggga 3060
aagacuccua	aauuuaaacu	acccauacaa	aaggaaacau	gggaaacau	guggacagag 3120

uauuggcaag	ccaccuggau	uccugagugg	gaguuguuu	auacccucc	uuuagugaaa	3180
uuauugguacc	aguuagagaa	agaacccaua	guaggagcag	aaaccuucua	uguagauuggg	3240
gcagcuacaa	gggagacuaa	auuaggaaaa	gcaggauaug	uuacuaacaa	aggaagacaa	3300
aagguugucc	cccuaacuaa	cacaacaaau	cagaaaacug	aguuaacaagc	aauuuaucua	3360
gcuuugcagg	auucaggauu	agaaguaaac	auaguaacag	acucacaaau	ugcauuagga	3420
aucauuaaag	cacaaccaga	uaaaagugaa	ucagaguuaug	ucaaucaaaau	aaauagagcag	3480
uuauuaaaaa	aggaaaaggu	cuaucuggca	uggguaccag	cacacaaagg	aaauuggagga	3540
aaugaacaag	uagauaaaau	agucagugcu	ggaaucagga	aaauacuauu	uuuagauugga	3600
auagauaagg	cccaagauga	acaugagaaa	uauacacagua	auuggagagc	aauggcuagu	3660
gauuuuaacc	ugccaccugu	aguagcaaaa	gaaauaguag	ccagcuguga	uaaaugucag	3720
cuaaaaggag	aagccaugca	uggacaagua	gacuguguc	caggaauaug	gcaacuagau	3780
uguacacauu	uagaaggaaa	aguuaucug	ugagcaguuc	auguagccag	uggauauua	3840
gaagcagaag	uuauuccagc	agaaacaggg	caggaaacag	cauauuuucu	uuuaaaauua	3900
gcaggaagau	ggccaguaaa	aacaauacau	acagacaaug	gcagcaauuu	caccagugcu	3960
acgguaaagg	ccgccuguuu	gugggcccga	aucaagcagg	aaauuggaa	ucccuacaau	4020
ccccaaaguc	aggaguguu	agaaucuau	aaauaagaau	uaaagaaaa	uaauaggacag	4080
guaaagagau	aggcugaaca	ucuaagaca	gcaguacaaa	uggcaguauu	caucuacaag	4140
cuaagaagau	agagagggau	uggggggguac	agugcagggg	aaagaauagu	agacauaaua	4200
gcaacagaca	uacaaacuaa	agaauuacaa	aaacaaauua	caaaaauuc	aaauuuucgg	4260
guuuauuaca	gggacagcag	aaauccacu	uggaaaggac	cagcaaagcu	ccucuggaaa	4320
ggugaagggg	caguaguauu	acaagauau	agugacauaa	aaguagugcc	aagaagaaaa	4380
gcaaagauca	uuagggaauu	uggaaaacag	agggcagug	augauugugu	ggcaaguaga	4440
caggauagag	auuagaacau	ggaaaaguuu	aguaaaacac	cauauuguaug	uuucagggaa	4500
agcuagggga	ugguuuuaua	gacauacua	ugaaagcccu	cauccaaga	uaaguuucaga	4560
aguacacau	ccacuagggg	augcuagauu	gguaauaaca	acauauuggg	gucugcauac	4620
aggagaaaag	gacuggcacu	ugggucaggg	agucuccaua	gaauggagga	aaaagagaua	4680
uagcacacaa	guagaccug	aacuagcaga	ccaacuauuu	caucuguaau	acuuugacug	4740
uuuuucagac	ucugcuaua	gaaaggccuu	auuaggacac	auaguuaagc	cuagguguga	4800
auaucaagca	ggacauaaca	agguaggau	ucuacaauac	uuggcacuag	cagcauuauu	4860
aacacaaaaa	aagauaaagc	caccuuugcc	uaguguuacg	aaacugacag	aggauagau	4920
gaacaagccc	cagaagacca	agggccacag	agggagccac	acaauagaau	gacacuagag	4980
cuuuuagagg	agcuuaagaa	ugaagcuguu	agacauuuuc	cuaggauuu	gcuccauggc	5040
uuagggcaac	auaucuauga	aacuuauugg	gauacuuggg	caggagugga	agccauaaua	5100
agaauucugc	aacaacugcu	guuuauccau	uuucagaauu	gggugucgac	auagcagaau	5160
agggcuuacu	cgacagagga	gagcaagaaa	uggagccagu	agaucuuaga	cuagagcccu	5220
ggagagcauc	aggaagucag	ccuaaaacug	cuuguaccaa	uugcuauugu	aaaaaguguu	5280
gcuuucuuug	ccaaguuuu	uucauaacaa	aagccuuagg	caucuccuau	ggcaggaaga	5340
agcggagaca	gcgacgaaga	ccuccucaag	gcagucagac	ucaucaaguu	ucucuaucaa	5400
agcaguaagu	aguacaugua	augcaaccua	uacaaaauag	aaauaguagca	uuaguaguag	5460
caauaauaau	agcaauagu	guguggucca	uaguaaucau	agaauauagg	aaaauauuaa	5520
gacaaagaaa	aaauagacag	uuauuugua	gcuaauaga	aagagcagaa	gacaguggca	5580
augagaguga	aggagaaaua	ucagcacuug	uggagauggg	gguggagaug	gggcaccaug	5640
cuccuuggga	uguugaugau	cuguagugcu	acagaaaaau	ugugggucac	agucuauuau	5700
gggguaccug	uguggaagga	agcaaccacc	acucuauuuu	gugcaucaga	ugcuuaagca	5760
uauagauacg	agguacauaa	uguuuugggc	acacauuccu	guguacccac	agaccccaac	5820
ccacaagaag	uaguauuggu	aaugugaca	gaaaauuuua	acauguggaa	aaugacauug	5880
guagaacaga	ugcaugagga	uauaaucagu	uuauuggauc	aaagccuaaa	gccaugugua	5940
aaauuaaccc	cacucugugu	uaguuuuaag	ugcacugauu	ugaagaaua	uacuaauacc	6000
aaauaguaga	gcggggagaau	gauaauggag	aaaggagaga	uaaaaaacug	cucuuaauaa	6060
auagcagcaa	gcuaaagagg	uaaggugcag	aaagaauaug	cauuuuuuua	uaaacuugau	6120
auaaauacca	uagauaaua	uacuaccagc	uauacguuga	caaguuguaa	caccucaguc	6180
auuacacagg	ccuguccaaa	gguaucuuu	gagccauuuc	ccauacauua	uugugccccg	6240
gcugguuuuu	cgauucuaaa	auguaauaau	aagacguuca	auggaacagg	accauguaca	6300
aaugucagca	caguacaauu	uacacaugga	auuaggccag	uaguaucaac	ucaacugcug	6360
uuaaauggca	gucuggcaga	agaagaggua	guauuagau	cugccaaauu	cacagacaa	6420
gcuaaaacca	uaauaguaca	gcugaaccua	ucuguagaaa	uuauuuguac	aagacccaac	6480
aacaauacaa	gaaaaaguu	ccguauccag	agaggaccag	ggagagcauu	uguuacaaua	6540
ggaaaaauag	gaaauaugag	acaagcacau	uguaacauua	guagagcaaa	auggaauaac	6600
acuuuaaaac	agauagauag	caaaauaaga	gaacaaauug	gaaauaauua	aacaaauaac	6660
uuuaagcagu	ccucaggagg	ggaccagaaa	auuguaacgc	acaguuuuaa	uuguggaggg	6720
gaauuuuuu	acuguaauuc	aacacaacug	uuuaauagua	cuugguuuaa	uaguacuugg	6780
aguacuaaag	ggucaaaaua	cacugaagga	agugacacaa	ucacccuccc	augcagaaua	6840
aaacaaauua	uaaacaugug	gcaggaagua	ggaaaagcaa	uguaugcccc	ucccaucagu	6900
ggacaaauua	gauguucauc	aaauauuaca	gggugcuaau	uaacaagaga	uggguguaau	6960
agcaacaauu	aguccgagau	cuucagaccu	ggaggaggag	auaugaggga	caauuggaga	7020
agugaauuuu	auaaauuaa	aguaguaaaa	auugaaccau	uaggaguagc	accaccaag	7080

gcaaagagaa	gaguggugca	gagagaaaaa	agagcagugg	gaauaggagc	uuuguuccuu	7140
ggguucuu	gagcagcagg	aagcacuaug	ggcgagcgcu	caaugacgcu	gacgguacag	7200
gccagacaau	uauugucugg	uauagugcag	cagcagaaca	auuugcugag	ggcuauugag	7260
gcgcaacagc	aucuguugca	acucacaguc	ugggggcauca	agcagcucca	ggcaagaau	7320
cuggcugugg	aaagauaccu	aaaggaucaa	cagcuccugg	ggauuugggg	uugcucugga	7380
aaacucauuu	gcaccacugc	ugugccuugg	aaugcuagu	ggaguaauaa	aucucuggaa	7440
cagauuugga	auaacaugac	cuggauggag	ugggacagag	aaaauaaca	uuacacaagc	7500
uuaauacacu	ccuuaauuga	agaaucgcaa	aaccagcaag	aaaagaaua	acaagaaua	7560
uuggaauuag	auaaaugggc	aaguugugg	aaauugguuu	acauaaca	uuggcugugg	7620
uauauaaaau	uauucauaau	gauaguagga	ggcuugguag	guuuuagaa	aguuuuugcu	7680
guacuucug	uagugaauag	aguagggcag	ggauauucac	cauuauugcu	ucagacccac	7740
cucccaaucc	cgaggggacc	cgacaggccc	gaaggaaug	aagaagaagg	uggagagaga	7800
gacagagaca	gauccauucg	auuagugaac	ggauccuuag	cacuuauucg	ggacgaucug	7860
cgagagccugu	gccucuucag	cuaccaccgc	uugagagacu	uacucugau	uguaacgagg	7920
auuguggaac	uucugggagc	cagggggugg	gaagcccua	aaauuggug	gaucuccua	7980
caguauugga	gucaggagcu	aaagaauagu	gcuguuagcu	ugcucaaugc	cacagcuaua	8040
gcaguagcug	agggggacaga	uagggguaua	gaaguaguac	aaggagcuua	uagagcuauu	8100
cgccacauac	cuagaagaau	aagacagggc	uuggaaagga	uuuugcuaua	agaugggugg	8160
caagugguca	aaaaguagug	ugguuggaug	gccugcugua	agggaaagaa	ugagacgagc	8220
ugagccagca	gcagaugggg	ugggagcagc	aucucgagac	cuagaaaaac	auggagcaau	8280
cacaaguagc	aacacagcag	cuaacaauuc	ugauugugcc	uggcuagaag	cacaagagga	8340
ggaggaggug	gguuuuucag	ucacaccuca	gguaccuuua	agaccaauga	cuuacaaggc	8400
agcuguagau	cuuagccacu	uuuuuuuaga	aaagggggga	cuggaagggc	uaauucacuc	8460
ccaacgaaga	caagauaucc	uugaucugug	gaucuaccac	acacaaggcu	acuucccuga	8520
uuagcagaac	uacacaccag	ggccagggau	cagauaucca	cugaccuuug	gauggugcua	8580
caagcuagua	ccaguugagc	cagagaaguu	agaagaagcc	aacaaaggag	agaacaccag	8640
cuuguuacac	ccugugagcc	ugcauggaau	ggauagcccg	gagagagaag	uguuagagug	8700
gagguuugac	agccgccuag	cauuucauca	cauggcccgga	gagcugcauc	cggaguacuu	8760
caagaacugc	ugacaucgag	cuugcuacaa	gggacuaucc	gcuggggacu	uuccagggag	8820
gcguggccug	ggcggggacug	gggaguggcg	agcccucaga	uccugcauau	aagcagcugc	8880
uuuuugccug	uacuggggucu	cucugguuag	accagaucug	agccugggag	cuc	8933

<210> 5  
 <211> 30  
 <212> DNA  
 <213> HIV

<220>  
 <221> source  
 <222> (1)...(30)  
 <223> Sequence of AE(+)4134 HIV-specific probe.

<400> 5  
 ccacaatttt aaaagaaaag gggggatttg

30

<210> 6  
 <211> 67  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Sequence of (-)3837 A30 capture probe.

<400> 6  
 ccctgtttct gctggaataa cttctgcttc tatattttaa aaaaaaaaaa aaaaaaaaaa  
 aaaaaa

60  
 67

<210> 7  
 <211> 57  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Sequence of the (-)4258 A30 capture probe.

<400> 7  
tctgtctgtcc ctgtaataaa cccgttttaa aaaaaaaaaa aaaaaaaaaa aaaaaaa

57

<210> 8  
<211> 22  
<212> DNA  
<213> HIV

<220>  
<221> source  
<222> (0)...(0)  
<223> Sequence of the AE(+)4134b probe

<400> 8  
ccacaatttt aaaagaaaag gg

22

<210> 9  
<211> 8933  
<212> RNA  
<213> Artificial Sequence

<220>  
<223> Sequence of the IAC-Bscr pseudo target

<221> mutation  
<222> (4140)...(4159)  
<223> Mutated positions: 4140-42, 4145-47, 4152,  
4156-57, 4159

<400> 9

gagcucucuc	gacgcaggac	ucggcuugcu	gaagcgcgca	cggcaagagg	cgaggggagg	60
cgacugguga	guacgccaaa	aauuuugacu	agcggaggcu	agaaggagag	agaugggugc	120
gagagcgua	guauuaagcg	ggggagaaau	agaucgaugg	gaaaaaaauuc	gguaaaggcc	180
aggggggaaag	aaaaaaauaua	aauuuaaaca	uauaguaugg	gcaagcaggg	agcuagaacg	240
auucgcaguu	aaucucggcc	uguuagaaac	aucagaaggc	uguagacaaa	uacugggaca	300
gcuacaacca	ucccuucaga	caggauacaga	agaacuuaga	ucauuauaua	auacaguagc	360
aaaccucua	ugugugcauc	aaaggauaga	gauaaaagac	accaaggaag	cuuugacaaa	420
gauagaggaa	gagcaaaaca	aaaguaagaa	aaaagcacag	caagcagcag	cugacacagg	480
acacagcagu	caggucagcc	aaaauuaccc	uauagugcag	aacauccagg	ggcaaauggu	540
acaucaggcc	auaucaccua	gaacuuuaaa	ugcaugggua	aaaguaguag	aagagaaggc	600
uuucagccca	gaaguaauac	ccauguuuuc	agcauuauca	gaaggagcca	ccccacaaga	660
uuuaaacacc	augcuuaaca	cagugggggg	acaucaagca	gccaugcaaa	uguuaaaaga	720
gaccaucaau	gagggaagcug	cagaauggga	uagaguacau	ccagugcaug	cagggccuau	780
ugcaccaggc	cagaugagag	aaccaagggg	aagugacaua	gcaggaacua	cuaguacccu	840
ucaggaacaa	auaggauagg	ugacaaaaua	uccaccuauc	ccaguaggag	aaauuuauaa	900
aagauggaua	auccugggau	uaaaauaaaa	aguaagaaug	uauagcccua	ccagcauucu	960
ggacauaaga	caaggaccaa	aagaaccuuu	uagagacuau	guagaccggu	ucuauaaaac	1020
ucuaagagcc	gagcaagcuu	cacaggaggu	aaaaaaauug	augacagaaa	ccuuguuggu	1080
ccaaaaugcg	aaccagauu	guaagacuau	uuuaaaagca	uugggaccag	cggcuacacu	1140
agaagaaaug	augacagcau	gucagggagu	aggaggacc	ggccauaagg	caagaguuuu	1200
ggcugaagca	augagccaag	uaacaaauac	agcuaccaua	augaugcaga	gaggcauuu	1260
uaggaaccaa	agaaagaugg	uuaguguuu	caauuguggc	aaagaagggc	acacagccag	1320
aaauugcagg	gcccuaagga	aaaagggcug	uuggaaaugu	ggaaaggaag	gacaccaaau	1380
gaaagauugu	acugagagac	aggcuauuuu	uuuagggag	aucuggccuu	ccuacaagg	1440
aaggccagg	aaauuuucuu	agagcagacc	agagccaaca	gccccaccu	uucuucagag	1500
cagaccagag	ccaacagccc	caccagaaga	gagcuucagg	ucugggguag	agacaacaac	1560
ucccccucag	aagcaggagc	cgauagacaa	ggaacugua	ccuuuaacuu	cccucagau	1620
acucuuuggc	aacgaccccu	cgucacaaau	aagauagggg	ggcaacuaaa	ggaagcucua	1680
uuagauacag	gagcagauga	uacaguauua	gaagaaauga	guuugccagg	aagauggaaa	1740
ccaaaaauga	uagggggauu	uggagguuuu	aucaaaagaa	gacaguaua	ucagauacuc	1800
auagaaaucu	guggacauaa	agcuauaggu	acaguauuag	uaggaccuac	accugucaac	1860
auaaauugga	gaaauucuguu	gacucagauu	gguggcacuu	uaaaauuuucc	cauuagcccu	1920
auugagacug	uaccaguaaa	auuaaagcca	ggaauggaug	gccccaaaagu	uaaacaauug	1980
ccauugacag	aagaaaaauu	aaaagcauuu	guagaaaauu	guacagaaaau	ggaaaaggaa	2040
gggaaaauuu	caaaaauugg	gccugagaau	ccauacaaua	cuccaguauu	ugccauaaag	2100
aaaaaagaca	guacuaaaug	gagaaaaaua	guagauuuca	gagaacuuua	uaagagaacu	2160

caagacuucu	gggaaguuca	auuaggaaua	ccacaucceg	caggguuaaa	aaagaaaaaa	2220
ucaguaacag	uacuggaugu	gggugaugca	uauuuuucag	uucccuuaga	ugaagacuuc	2280
aggaaguaua	cugcauuuac	cauaccuagu	auaaacaaug	agacaccagg	gauuagauau	2340
caguacaaug	ugcuuccaca	gggauggaaa	ggauccaccag	caauauucca	aaguagcaug	2400
acaaaaaucu	uagagccuuu	uaaaaaacaa	aauccagaca	uaguuaucua	ucaauacaug	2460
gaugauuugu	auguaggauc	ugacuuaгаа	auagggcagc	auagaacaaa	aaauagaggag	2520
cugagacaac	aucuguugag	guggggacuu	accacaccag	acaaaaaaca	ucagaaagaa	2580
ccuccauucc	uuuggauggg	uuaugaacuc	cauccugaua	aauggacagu	acagccuaua	2640
gugcugccag	aaaaagacag	cuggacuguc	aaugacauac	agaaguuaгу	ggggaaauug	2700
aauggggcaa	gucagauuuu	cccagggauu	aaaguaaggc	aauuauгуaa	acuccuuga	2760
ggaaaccaaag	cacuaacaga	aguaauacca	cuaacagaag	aagcagagcu	agaacuggca	2820
gaaaacagag	agaauucuaaa	agaaccagua	cauggagugu	auuauagccc	aucaaaagac	2880
uuauuagcag	aaaauacagaa	gcaggggcaa	ggccaaugga	cauaucaaaу	uuaucaagag	2940
ccauuuaaaa	aucugaaaaac	aggaaaaauu	gcaagaauga	ggggugccca	cacuaaugau	3000
guaaaaacaaу	uaacagaggc	agugcaaaaa	auaaccacag	aaagcauagu	aaauugggga	3060
aagacuccua	aauuuaaacu	acccaucaaa	aaggaaacau	gggaaacaug	guggacagag	3120
uauuggcaag	ccaccuggau	uccugagugg	gaguuuгуua	auaccccucc	uuuagugaaa	3180
uuauugguacc	aguuaгagaa	agaacccaua	guaggagcag	aaaccuucua	uguagauggg	3240
gcagcuacaa	gggagacuua	auuaggaaaa	gcaggauaug	uuacuaacaa	aggaagacaa	3300
aagguugucc	cccuaacuua	cacaacaaau	cagaaaacug	aguuaacaagc	aauuuaucua	3360
gcuuugcagg	auucaggauu	agaaguaaac	auaguaacag	acucacaaуa	ugcauuagga	3420
aucauucaag	cacaaccaga	uaaaaгugaa	ucagaguuaг	ucaaucaaaу	aaуagagcag	3480
uuauuaaaaa	aggaaaaggu	cuaucuggca	uggguaccag	cacacaaagg	aaуuggagga	3540
aaugaacaag	uagauaaaуu	agucagugcu	ggauucagga	aaauacuauu	uuuagaugga	3600
auagauaagg	cccaagauga	acaugagaaa	uaucacagua	auuggagagc	aauggcuagu	3660
gauuuuaacc	ugccaccugu	aguagcaaaa	gaaauaguag	ccagcuguga	uaaaugucag	3720
cuaaaaggag	aagccaugca	uggacaagua	гacuguaguc	caggaauaug	gcaacuagau	3780
uguacacauu	uagaaggaaa	aguuaucug	guagcaguuc	auguagccag	uggauauua	3840
gaagcagaag	uuauuccagc	agaaacaggg	caggaaacag	cauauuuucu	uuuaaaуua	3900
gcaggaagau	ggccaguaaa	aacaauacau	acagacaauг	gcagcaauuu	caccagugcu	3960
acgguaaagg	ccggcuuguг	gugggcccgg	aucaagcagg	aauuuggaaу	uccuacaaу	4020
ccccaaggag	agggcuagu	agaaucuauг	aauaaаgaau	uaaagaaaaу	uaуaggacag	4080
guaagagauc	aggcugaaca	ucuuaagaca	gcaguaaaaa	uggcaguaуu	cauccagaaa	4140
aaуauuuгaa	aggggaagcu	uggggggуac	agugcagggg	aaagaaуagu	agacauaaуa	4200
gcaacagaca	uacaaacuua	agaauuacaa	aaacaaauua	caaaaaуuca	aaauuuucgg	4260
guuuauuaca	gggacagcag	aaauccacuu	uggaaaggac	cagcaaagcu	ccucuggaaa	4320
ggugaagggg	caguaguaau	acaagauaaу	agugacauaa	aaguagugcc	aagaagaaaa	4380
gcaaгauca	uuagggauua	uggaaaacag	auggcaggug	augauugugu	ggcaaguaga	4440
caggauгagg	auuagaacau	ggaaaaguuu	aguaaaaacac	cauauгуauг	uuucagggaa	4500
agcuagggga	ugguuuuuaу	gacaucacua	ugaaagcccu	cauccaagaa	uaaguucaga	4560
aguacacauc	ccacuagggg	augcuagaуu	gguaauuaca	acauauuggg	gucugcauac	4620
aggagaaaga	gacuggcauu	ugggucaggg	agucuccaua	gaauggagga	aaaagagaua	4680
uagcacacaa	guagaccucg	aacuagcaga	ccaacuauuu	caucuguaуu	acuuugacug	4740
uuuuucagac	ucugcuauaa	gaaaggccuu	auuaggacac	auaguuaгcc	cuagguguga	4800
auaucaagca	ggacauaaca	agguaggauc	ucuacaauac	uuggcacuag	cagcauuuag	4860
aacaccaaaa	aagauaaagc	caccuuugcc	uaguguuacg	aaacugacag	aggauagauг	4920
gaacaagccc	cagaagacca	agggccacag	agggagccac	acaaугaaug	gacacuagag	4980
cuuuuagagg	agcuuaagaa	ugaagcuguu	agacauuuuc	cuaggauuuг	gcuccauggc	5040
uuagggcaac	auaucuauga	aacuauggg	gauacuuggg	caggagugga	agccaуaaуa	5100
aggaуucugc	aacaacugcu	guuuauccau	uuucagaauu	ggguгucгac	auagcagaau	5160
aggcguaacu	ггacagagga	gagcaagaaa	uggagccagu	agauccuaga	cuagagcccu	5220
ggaagcaucc	aggaagucag	ccuaaaaacug	cuuguaccaa	uugcuauugu	aaaaaguguu	5280
gcuuucauug	ccaaguuuгу	uucauaacia	aagccuuagg	caucuccuau	ggcaggaaga	5340
agcgгagaca	гггacгaaga	ccuccucaag	гcagucagac	ucaucaaguu	ucucuaucaa	5400
agcaguaagu	aguacaugua	augcaaccua	uacaaauagc	aaуaguagca	uuaguaguag	5460
caauaaуaaу	agcaauaguu	гuguggucca	uaguaaucau	agaauauagg	aaaauauuaa	5520
gacaaagaaa	aaуagacagg	uuauuугaua	гacuaauaga	aagagcagaa	гacaguggca	5580
augagaguga	aggagaaaua	ucagcacuug	uggagauggg	ггugгgagauг	gggacccaug	5640
cuccuuggga	uguugaugau	cuguagugcu	acagaaaaуu	ugugggucac	agucuaуuaу	5700
ggggуaccug	uguggaaggа	agcaaccacc	acucuaуuuu	гugcaucaga	ugcuaaagca	5760
uaugauacag	agguacauaa	uguuuggggc	acacaugccu	гuguacccac	agaccccaac	5820
ccacaagaag	uaguauuggu	aaaugugaca	gaaaauuuua	acauguggaa	aaaugacauг	5880
гуagaacaga	ugcaugagga	uaуaaucagu	uuaugggauc	aaagccuaaa	гccaugugua	5940
aaauuaaccc	cacucugugu	uaguuuaaag	ugcacugauu	ugaagaauga	uacuaauacc	6000
aaуaguagua	гcgggгaau	gauaauggag	aaaggagaga	uaaaaaacug	cucuуucaau	6060
aucagcacaa	гcauaagagg	uaaggugcag	aaagaauaug	cauuuuuuua	uaaacuugau	6120



auaaauaccaa	uagauaauga	uacuaccagc	uauacguuga	caaguuguaa	caccucaguc	6180
auuacacagg	ccuguccaaa	gguaucuuu	gagccaauc	ccauacauua	uugugccccg	6240
gcugguuuug	cgauucuaaa	auguaauaa	aagacguuca	auggaacagg	accauguaca	6300
aaugucagca	caguacaaug	uacacaugga	auuaggccag	uaguaucaac	ucaacugcug	6360
uuaaauggca	gucuggcgag	agaagaggua	guaaauagau	cugccaauuu	cacagacaau	6420
gcuaaaacca	uaauaguaca	gcugaacca	ucuguagaaa	uuauuuguac	aagacccaac	6480
aaacaaucac	gaaaaaguau	ccguaucagg	agaggaccag	ggagagcauu	uguuacaaua	6540
ggaaaaauag	gaaauaugag	acaagcacau	uguaacauua	guagagcaaa	auggaauaac	6600
acuuuaaaac	agauagauag	caaauuaaga	gaacaauuug	gaaauaauaa	aacaauaauc	6660
uuuaagcagu	ccucaggagg	ggacccagaa	auuguaacgc	acaguuuuaa	uuguggaggg	6720
gaauuuuucu	acuguaauuc	aacacaacug	uuuaauagua	cuugguuuaa	uaguacuugg	6780
aguacuaaag	ggucaaaaua	cacugaagga	agugacacaa	ucaccucccc	augcagaaua	6840
aaacaaaaua	uaaacaugug	gcagggaagua	ggaaaagcaa	uguaugcccc	ucccaucagu	6900
ggacaaaaua	gauguucauc	aaauauuaca	gggcugcuau	uaacaagaga	uggugguaau	6960
agcaacaaug	aguccgagau	cuucagaccu	ggaggaggag	auaugaggga	caauugggag	7020
agugaauuau	auaaaauaaa	aguaguaaaa	auugaaccau	uaggaguagc	accaccaag	7080
gcaaagagaa	gaguggugca	gagagaaaaa	agagcagugg	gaauaggagc	uuuguuccuu	7140
ggguucucug	gagcagcagg	aagcacuaug	ggcgagcgu	caaugacgcu	gacgguacag	7200
gccagacaau	uauugucugg	uauagugcag	cagcagaaca	auuugcugag	ggcuauugag	7260
gcgcaacagc	aucuguugca	acucacaguc	ugggggcauca	agcagcucca	ggcaagaau	7320
cuggcugugg	aaagauaccu	aaaggaucaa	cagcuccugg	ggauuugggg	uugcucugga	7380
aaacucuuuu	gcaccacugc	ugugccuugg	aaugcuaguu	ggaguaauaa	aucucuggaa	7440
cagauuugga	auaacaugac	cuggaugggag	ugggacagag	aaauuaacaa	uuacacaagc	7500
uuauuacacu	ccuuauuuga	agaauccgaa	aaccagcaag	aaaagaauga	acaagaauua	7560
uuggaaauag	auaaaugggc	aaguuugugg	aauggguuaa	acauaacaaa	uuggcugugg	7620
uauauaaaau	uauucauaau	gauaguagga	ggcuugguag	guuuuagaau	aguuuuugcu	7680
guacuucucg	uagugaauag	aguuaaggcag	ggauauucac	cauuauucgu	ucagaccac	7740
cucccaaucc	cgaggggacc	cgacaggccc	gaaggaauag	aagaagaagg	uggagagaga	7800
gacagagaca	gauccauucg	auuagugaac	ggauccuuag	cacuuauucg	ggacgaucug	7860
cggagccugu	gccucucucg	cuaccaccgc	uugagagacu	uacucuuugau	uguaacgagg	7920
auuguggaac	uucugggacg	cagggggugg	gaagcccua	aaauuuggug	gaauuccua	7980
caguauugga	gucaggagcu	aaagaauagu	gcuguuagcu	ugcucaaugc	cacagcuaua	8040
gcaguagcug	aggggacaga	uaggguuaua	gaaguaguac	aaggagcuua	uagagcuauu	8100
cgccacauac	cuagaagaau	aagacagggc	uuggaaagga	uuuugcuaua	agaugggugg	8160
caagugguca	aaaaguagug	ugguuggaug	gccugcugua	agggaaagaa	ugagacgagc	8220
ugagccagca	gcagaugggg	ugggagcagc	aucucgagac	cuagaaaaac	auaggagcau	8280
cacaaguagc	aacacagcag	cuaacaauuc	ugauugugcc	uggcuagaag	cacaagagga	8340
ggaggaggug	gguuuuuccag	ucacaccuca	gguaaccuuu	agaccaauga	cuuacaaggc	8400
agcuguagau	cuuagccacu	uuuuuuuaga	aaagggggga	cuggaagggg	uaauucacuc	8460
ccaacgaaga	caagauaucc	uugaucugug	gaucuaaccac	acacaaggcu	acuucccuga	8520
uuagcagaac	uacacaccag	ggccagggau	cagauaucca	cugaccuuug	gauggugcua	8580
caagcuagua	ccaguugagc	cagagaaguu	agaagaagcc	aacaaaggag	agaacaccag	8640
cuuguuacac	ccugugagcc	ugcauggaau	ggaugacccg	gagagagaag	uguuagagug	8700
gagguuugac	agccgccuag	cauuucauca	cauggcccgga	gagcugcauc	cggaguacuu	8760
caagaacugc	ugacaucgag	cuugcuacaa	gggacuaucc	gcuggggacu	uuccagggag	8820
gcguggccug	ggcgggacug	gggaguggcg	agcccucaga	uccugcauau	aagcagcugc	8880
uuuuugccug	uacugggucu	cucugguuag	accagaucug	agccuggggag	cuc	8933